

UK

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/711,025	BRECHER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jean B Corrielus	2637	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/18/05.
2. ☒ The allowed claim(s) is/are 1-19 and 26-31, renumbered as 1-25, respectively.
3. ☒ The drawings filed on 12 December 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).


\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

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|---|--|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____</li> </ol> |
|---|--|

  
 Jean B Corrielus  
 Primary Examiner  
 Art Unit: 2637  
 2/3/05

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Abdul Zindani on 2/2/05.

The application has been amended as follows:

#### IN THE CLAIMS:

Claims 1, 10 and 29 have been amended as follow:

1. (Currently amended) A method of operating an equalizer which is provided in a digital communications receiver to reduce symbol decoding errors therein and which has a feed forward digital filter defined by a plurality of feed forward coefficients and a feedback digital filter defined by a plurality of feedback coefficients, comprising:

determining initial values for a subset of said feed back and feed forward coefficients without determining initial values for the remainder of said feed back and feed forward coefficients;

thereafter, in response to the initial values of the subset of said feed back and feed forward coefficients, determining subsequent values for the subset of said feed

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back and feed forward coefficients and also for the remainder of said feed back and feed forward coefficients; and

based on the subsequent values of said feed back and feed forward coefficients, using the equalizer to decode symbols that have arrived at the receiver in a digital transmission burst.

10. ( Currently amended)      An equalization apparatus for reducing symbol decoding errors in a digital communications receiver, comprising:

a feed forward digital filter having an input for receiving digital transmission bursts , said feed forward digital filter defined by a plurality of feed forward coefficients;

a decision element having an input coupled to said feed forward digital filter for deciding what symbols are included in the received digital transmission bursts, said decision element having an output for providing a signal indicative of the decided symbols;

a feedback digital filter having an input coupled to said output of said decision element for filtering said signal indicative of the decided symbols, said feedback digital filter having an output for providing a filtered version of said signal, said output of said feedback digital filter coupled to said input of said decision element, said feedback digital filter defined by a plurality of feedback coefficients; and

a coefficient determiner coupled to said feed forward filter and said feedback filter for determining initial values for a subset of said feed back and feed forward coefficients without determining initial values for the remainder of said feed back and

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feed forward coefficients, and for thereafter determining subsequent values for the subset of said feed back and feed forward coefficients and also for the remainder of said feed back and feed forward coefficients in response to the initial values of the subset of said feed back and feed forward coefficients, said coefficient determiner having an output coupled to said feed forward digital filter and said feedback digital filter for first outputting said initial coefficient values to said feed back and feed forward filters and for thereafter outputting said subsequent coefficient values to said feed back and feed forward filters.

29. (Currently amended) An equalization apparatus for reducing symbol decoding errors in a digital communications system, comprising:

a feed forward digital filter defined by a plurality of feed forward coefficients;

a feedback digital filter coupled to the feed forward digital filter and defined by a plurality of feedback coefficients; and

a coefficient determiner coupled to said feed forward filter and said feedback filter and configured to determine initial values for a subset of the plurality of feed forward and feed back coefficients without determining initial values for the remainder of said feed back and feed forward coefficients; and

in response to the initial values of the subset of said feed back and feed forward coefficient, determine subsequent values for the subset of feed back and feed forward coefficients and the remainder of the plurality of feed forward and feedback coefficients.

Claim 31, line 5, before coefficients, --feed back and feed forward-- has been inserted.

### **Reasons for allowance**

3. The following is an examiner's statement of reasons for allowance: a method and apparatus for reducing symbol decoding errors in a digital communications system are disclosed. The closest prior art Murakami US Patent No. 5,175,747, discloses similar method and apparatus. However, in combination with the other claimed limitations, Murakami does not teach or fairly suggests the limitations recited in claim 1, lines 5-14; claim 10, lines 14-24; claim 26, lines 3-8 and claim 29, lines 6-12. Such limitations, as recited in the claims, are neither anticipated nor rendered obvious by Murakami.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Maxi-Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-3086. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jean B Corielus  
Primary Examiner  
Art Unit 2637 2/3/05